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Opinion And Attitude of Expectant Mothers Towards Cesarean Delivery, A Quantitive Cross-Sectional Survey at A Public Tertiary Care Hospital in Pakistan.

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Original Article

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ABSTRACT

Introduction: Caesarean section (CS) rates are increasing globally, including in Pakistan. Understanding the insights and attitudes of pregnant females towards CS is crucial for improving maternal healthcare services.

Objective: This study aimed to assess the opinions and attitudes of pregnant women towards CS in Khyber Teaching Hospital, Peshawar, Pakistan.

Methodology: A quantitative descriptive cross-sectional study was conducted among 133 pregnant women attending the outpatient department of Khyber Teaching Hospital. A structured questionnaire was used to collect data, which was analyzed using SPSS version 30.0.

Results: The study found that pregnant women in Khyber Teaching Hospital had a strong preference for vaginal delivery, with 59.4% of respondents being illiterate and 91% identifying as Muslim. The study revealed that expectant mothers had positive perceptions with the mean of 3.462 and a standard deviation of 0.6, and negative attitude with the mean of 2.32 with the standard deviation of 0.641.

Conclusion: The study highlights the need for culturally sensitive health education campaigns to address the stigma and misconceptions surrounding CS. Improving health literacy, patient-provider communication, and access to high-quality care are essential for promoting informed decision-making and improving maternal health outcomes.

Introduction:

A common surgical technique called a caesarean section (C-section) involves making an incision in the mother's belly and uterus to deliver the baby (1). Although it is frequently a life-saving procedure, especially in cases where vaginal delivery could endanger the mother or child, (2), In Pakistan, cesarean deliveries have shown a significant upward trend over the past decade. The Pakistan Demographic and Health Survey (PDHS) 2022 reports that 24% of all births are now delivered by cesarean section, a rise from 15% in 2012(3). In some contexts, Caesarean sections are performed upon maternal request or due to cultural preferences, with limited consideration of medical necessity (4).

The global increase in C-section rates has become a significant public health issue (5). Given that greater rates are linked to needless risks for both the mother and the child, the World Health Organization (WHO) advises that the percentage of Caesarean deliveries should not surpass 10% to 15% of all births (6). Despite this, in many countries, including Pakistan, the rates of Caesarean sections have surpassed the recommended threshold (7). Factors such as advanced maternal age, rising rates of obesity and diabetes, and previous Caesarean deliveries are legitimate medical reasons for opting for C-sections (8). However, non-medical reasons, such as fear of labor pain, desire for convenience, and societal pressure, have also contributed to the increasing preference for surgical delivery (9). Studies from countries like the United States, Brazil, and China have reported C-section rates exceeding 30%, with similar trends emerging in parts of Europe and Latin America (10). These trends have raised concerns about the overuse of Caesarean sections, particularly in settings where vaginal birth could have been a safe and viable option.

In Pakistan, the rising C-section rates are also shaped by a combination of cultural, socioeconomic, and healthcare-related factors (11). Cultural beliefs around childbirth, including the view that vaginal delivery is a natural and desirable process, can make Caesarean sections seem undesirable or even shameful (12). In some urban areas, however, Caesarean sections are seen as a more “modern” and convenient method of childbirth, leading to social pressure to choose surgical delivery over vaginal birth. Fear of labor pain and complications during vaginal delivery is another psychological factor that influences women’s preferences (13, 14). A study highlighted that many women opted for Caesarean deliveries out of a fear of labor pain, even when there was no medical indication for surgery (9).

Moreover, healthcare providers play a crucial role in shaping women’s perceptions and decisions about childbirth (15). The manner in which information about delivery options is communicated can greatly influence a woman’s decision to choose a C-section (16). If healthcare providers present Caesarean sections as a safer or more convenient option, women may be more inclined to opt for it, even when it may not be medically necessary (17). In contrast, providing balanced and evidence-based information about both Caesarean and vaginal delivery options can empower women to make informed decisions regarding their childbirth method (18).

Understanding these perceptions and attitudes is crucial in guiding healthcare practices and improving maternal health outcomes. By examining the experiences of pregnant women at Khyber Teaching Hospital in Peshawar, this study aims to explore the factors that influence their choices regarding Caesarean sections. This research will contribute to the ongoing conversation around improving maternal care, reducing unnecessary C-sections, and promoting informed decision-making that prioritizes the health and well-being of both mothers and their babies. Through better education, communication, and counselling, healthcare providers can address misconceptions, alleviate fears, and help women make delivery choices that are truly in their best interest.

Material and Methods

At Khyber Teaching Hospital in Peshawar, Pakistan, pregnant women's attitudes and perceptions regarding Caesarean sections were assessed using a quantitative descriptive cross-sectional survey design. A cross-sectional study is a type of research design where data is gathered from multiple people at one time without changing the factors being observed. Pregnant women between the ages of 18 and 45 who could understand Urdu and Pashto and had a gestational age of 20 to 40 weeks made up the study population. Convenient sampling was utilized to choose study participants, the sample size was calculated using (Yamane's (1967) sampling formula $n = N/1+N\ (e)\ 2$).

The study was carried out at Khyber Teaching Hospital, a public tertiary care facility well-known for its obstetric services. The hospital has 120 beds in its gynecology wards as of November 2024, and it achieved ISO 9001-2015 accreditation in January 2003. Although the researcher approached other public sector hospitals in Peshawar for permission to conduct the study, permission was only granted by Khyber Teaching Hospital. The data collection process took place from August 2024 to November 2024, providing ample time to recruit participants, conduct interviews, and ensure data completeness. The first three months were dedicated to data collection, while the remaining time was allocated for data analysis and thesis completion.

Convenient sampling was applied to recruit participants for the study. This method involves collecting samples from individuals who are conveniently located near the research site (Edgar & Manz, 2017). The sample size for the study was 133 pregnant women who were randomly selected from the target population. The target population consisted of 200 pregnant women (aged 18-45 years, gestational age between 20-40 weeks) who attended the outpatient department of Khyber Teaching Hospital for antenatal checkups during September 2024. The sample size was calculated using Yamane's (1967) sampling formula.

Inclusion and exclusion criteria were used to recruit participants. Pregnant women between the ages of 18 and 45 who could understand Pashto or Urdu and had a gestational age between 20 and 40 weeks met the inclusion criteria. Participants were excluded if they had a history of stillbirth, neonatal death, traumatic birth experiences, intellectual disability, or serious medical or obstetric difficulties, such as placenta previa, preeclampsia, or multiple gestations with issues. The study also eliminated women who had taken part in comparable research trials in the previous six months.

Getting formal consent from the hospital's Ethical Review Committee, Medical Director, and Nursing Director was the first step in the participant recruitment procedure. The researcher then went up to the gynecology units' head nurses and explained the goal of the study. The study and its importance were explained to the participants once the head nurses gave their consent. Prior to distributing the self-administered structured questionnaire, each participant provided written informed consent. The study's goals, risks, rewards, and participants' rights were all described in the consent form. The researcher helped people with low literacy levels fill out the questionnaire and gave them verbal explanations.

The period of data gathering in 2024 was August through September. Participants' sociodemographic details, previous and present obstetric histories, and their knowledge and opinions on various delivery techniques, including caesarean sections, were all collected through a structured questionnaire. Participants' motives for selecting a certain delivery style and their willingness to accept a caesarean delivery if recommended were also investigated in the questionnaire. To enhance clarity and understanding, the questionnaire was explained in the local language during the roughly 40-minute interviews. Additionally, clinic employees received training on how to properly deliver the questionnaire.

Version 30.0 of SPSS (Statistical Package for Social Sciences) was used to analyze the data. The research topics were addressed using descriptive statistics, such as mean, standard deviation, and percentages, and the data was presented using frequency tables. The committee members and the thesis supervisor helped with the final interpretation of the findings.

Throughout the study, ethical considerations were of utmost importance. The Khyber Teaching Hospital's Health Information Management System (HIMS) Ethical Review Committee gave its approval to the research proposal. Prior to participation, the researcher acquired informed consent from each participant and made sure they were aware of their rights and the goal of the study. Interviewees were given IDs to ensure participant confidentiality, and the questionnaire did not contain any personal information. Physical copies of the data were kept in a restricted place, and soft copies were secured with strong passwords. Following the completion of the study, the research data will be disposed away in accordance with Khyber Teaching Hospital's disposal policy.

To sum up, this study investigated pregnant women's attitudes and views regarding caesarean sections using a quantitative descriptive cross-sectional research approach. A systematic questionnaire was used to gather data from 133 participants in the study, which was carried out at Khyber Teaching Hospital in Peshawar. To maintain the integrity of the study, descriptive statistics were used for data analysis, and ethical guidelines were closely adhered to.

Results and Findings

The sociodemographic details of the research participants are shown in Table 1 above. It revealed that the study participants' average age was 27.31 years, with a standard deviation of 4.580. The oldest participant was 36 years old,

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while the youngest was 18. Additionally, the participants' marital status showed that all of them were married women. According to the findings, 33.1% of the respondents had completed primary school, 4.5% had completed secondary school, and only 3% had completed tertiary education. Additionally, 9.0% of the respondents identified as Christians, while 91.0% were Muslims. Of the respondents, 59.4% were illiterate. The findings also showed that 11% belonged to various tribes, such as the Hindko, Chitrali, and Saraiki, while 80.5% were Pushtoon and 8.3% were Punjabi.

Table 1 Demographic Characteristics of the Participants.

Variable	Statistics			
Age	**Mean**	**Standard Deviation**	**Minimum**	**Maximum**
	27.31	4.580	18	36 years
Marital Status	**Categories**	**Frequency**	**Percentages**	
	Married	133	100%	
	Divorced	0	0%	
	Widowed	0	0%	
	Single Mother	0	0%	
Level of education	Illiterate	79	59.4%	
	Primary	44	33.1%	
	Secondary	6	4.5%	
	Tertiary	4	3.0%	
Religion	Christianity	12	9.0%	
	Islam	121	91.0%	
	Other	0	0%	
Tribe	Pushtoon	107	80.5%	
	Panjabi	11	8.3%	
	Other	15	11.3%	

Perception of study participants on caesarean section

According to the study's findings, pregnant women at Khyber Teaching Hospital have a generally positive opinion of cesarean sections (CS) as a delivery method, with a preference for vaginal delivery. The mean, SD, and decisions based on a cut-off point of 2.50 are shown in Table 4.2.1. A score of 2.50 or higher denotes a favorable perception, while a score below 2.50 denotes a negative one. With a mean score of 3.71 (SD = 0.519), item 1, which claimed that vaginal delivery is the typical method of delivery and cesarean birth is aberrant, was seen favorably.

Similarly, Item 2, which implied that women view cesarean delivery as reproductive failure, received a mean score of 3.80 (SD = 0.489), again suggesting a favorable impression. A favorable opinion of vaginal delivery was reinforced by the mean score of 3.53 (SD = 0.702) for Item 3, which stated that mothers regain their health condition sooner after vaginal delivery than after cesarean section. With a mean score of 3.50 (SD = 0.572), item 4, which claimed that giving birth vaginally is a better experience than having a cesarean section, likewise showed a favorable opinion. Lastly, Item 5, which highlighted the safety of Cesarean delivery in preventing damage to the body, such as vaginal tears, scored a mean of 3.31 (SD = 0.720), further supporting a positive perception of CS as a safe option.

The overall total perception score of 3.462 (SD = 0.6004) indicates that while participants acknowledged the safety of Cesarean delivery, there was moderate agreement with favorable comments regarding vaginal birth. This suggests a preference for vaginal delivery over Cesarean section. The findings also reflect cultural prejudices and misinformation about the necessity and safety of Cesarean sections, with participants showing a bias toward vaginal birth despite recognizing the potential benefits of Cesarean delivery in certain situations.

Table 2 Perception of study participants on caesarean section

S.no	Item	Mean	SD	Decision
1	"Vaginal delivery is normal mode of delivery while caesarean birth is abnormal"	3.71	0.519	positive
2	"Caesarean delivery is just like reproductive failure to women"	3.80	0.489	positive
3	"Mother regains her health status soon after vaginal delivery than caesarean section"	3.53	0.702	positive
4	"Having vaginal birth is great experience than a caesarean delivery"	3.50	0.572	positive
5	"Caesarean delivery is safe and can prevent unnecessary damage to the body e.g. vaginal tear"	3.31	0.720	positive
6	Total Perception	3.462	0.6004	positive

Table 3 Attitude of study participants towards caesarean section

s.no	**Item**	**mean**	**SD**	**Decision**
1	"Vaginal delivery creates affectionate mother and child relationship"	1.86	0.495	negative
2	"Caesarean section is preferable because it reduce pain when compared with vaginal delivery"	1.86	0.561	negative
3	"Caesarean born babies are healthier than vaginal delivered babies"	2.18	0.860	negative
4	"Caesarean delivery is safe for the babies' then vaginal delivery"	2.11	0.710	negative
5	"Having a caesarean delivery is like a death sentence for pregnant women e.g. (there is fear of death)"	3.59	0.579	Positive
6	Total Attitude	2.32	0.641	negative

The results of the study on the attitudes of pregnant women towards Cesarean section (CS) at Khyber Teaching Hospital show a generally negative attitude towards this mode of delivery. Table 4.2.3 presents the mean scores and standard deviations for the attitude items, with a cut-off point of 2.50 used to determine whether the attitude is positive or negative. Item 1, which stated that vaginal delivery creates an affectionate mother-child relationship, had a mean score of 1.86 (SD = 0.495), indicating a negative attitude. Item 2, suggesting that Cesarean section is preferable because it reduces pain compared to vaginal delivery, also had a mean score of 1.86 (SD = 0.561), reflecting a negative attitude. Similarly, Item 3, stating that Cesarean-born babies are healthier than vaginally delivered babies, had a mean score of 2.18 (SD = 0.860), and Item 4, asserting that Cesarean section is safer for the baby than vaginal delivery, had a mean score of 2.11 (SD = 0.710), both indicating negative attitudes towards Cesarean delivery. However, Item 5, which stated that having a Cesarean delivery is like a death sentence for pregnant women, had a higher mean score of 3.59 (SD = 0.579), indicating a positive perception of the fear surrounding Cesarean delivery.

The overall total attitude score of 2.32 (SD = 0.641) suggests that the pregnant women in the study held a negative attitude towards Cesarean section as a mode of delivery. These attitudes appear to be influenced by misconceptions, anxieties, and a lack of trust in medical professionals. A synthesis of the perceptions and attitudes reveals strong cultural preferences for vaginal delivery, persistent stigma and

fears surrounding Cesarean sections, and misconceptions fueled by limited education and cultural norms. For instance, many participants believed Cesarean sections to be a failure or harmful, which highlights the need for targeted educational campaigns and culturally sensitive interventions to correct these false beliefs and provide accurate information about the safety and necessity of Cesarean deliveries when required.

Discussion of the Findings

The findings of this study resonate with previous research, which highlights cultural preferences for vaginal delivery and the stigma surrounding cesarean sections (CS). In line with the results of this study, a study conducted in Nigeria found that while women acknowledged the medical necessity of CS, they preferred vaginal delivery due to cultural beliefs that vaginal birth is the "natural" mode of delivery (19) . Similarly, the results of this study reflect the strong cultural associations with vaginal delivery, particularly within the Pashtoon community, where vaginal birth is seen as a sign of strength and womanhood. These cultural beliefs contribute to a widespread perception that cesarean delivery is an unnatural procedure, viewed with fear and stigma. This aligns with findings from a study which demonstrated that women in a similar cultural context expressed negative attitudes toward CS, often due to misconceptions and cultural stigmas surrounding the procedure (20).

A qualitative study in Thailand revealed that many women preferred vaginal delivery because it aligned better with their birth plans and cultural expectations, despite understanding the medical necessity of CS in some cases. (21)The lack of health literacy in the study population, which led to confusion about the safety and medical benefits of CS, has been similarly reported in the literature. A study found that lower levels of maternal education were associated with greater fear and resistance to CS, suggesting that improving health literacy could be a key factor in changing attitudes toward cesarean sections (22). This underscores the importance of addressing educational gaps to improve women's understanding of childbirth options.

The fear of cesarean delivery and its potential risks, such as post-operative pain, complications, and death, was another significant finding in this study. This aligns with the study findings of a study, which found that women in low-resource settings, despite understanding the medical necessity of CS, often resisted the procedure due to concerns about its risks (23). The fear of post-operative pain and complications, along with the lack of trust in healthcare providers, were common as women expressed anxiety about potential complications during and after the surgery, as well as concerns about the competence of medical professionals (24). These findings highlight the importance of building trust between healthcare providers and patients, as mistrust of the healthcare system can exacerbate anxiety and delay necessary medical intervention.

Finally, the need for culturally sensitive health interventions to improve attitudes toward CS is strongly supported by the findings of this study. Similar research has emphasized the importance of addressing cultural barriers to improving maternal health outcomes. A study highlighted the effectiveness of culturally tailored health education campaigns in increasing awareness and reducing stigma associated with CS (25). By involving community leaders, religious figures, and using local languages in educational campaigns, these interventions successfully improved women's understanding of CS and its role in safeguarding maternal and child health. This study further supports the need for culturally appropriate educational initiatives to address misconceptions, reduce fear, and ultimately improve maternal health outcomes. As seen in the findings of both this study and others, culturally sensitive interventions are crucial in improving women's perceptions and attitudes toward CS, especially in communities where cesarean sections are stigmatized.

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CONFLICT OF INTEREST

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DATA SHARING STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request

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